

## Today's Topics:

\* SpaceNews 23Oct89 \*  
Building A (Very) Low Cost Repeater  
Field Day... OK... A proposal:  
New Dual Band HT from ICOM !!  
News From OSCAR-11 20Oct89  
PL259 connector assembly  
Weather Radio

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Date: 22 Oct 89 02:25:37 GMT

From: unisoft!hoptoad!peora!tsdiag!ka2qhd!kd2bd@ucbvax.Berkeley.EDU (John  
Magliacane Wall Township NJ)

Subject: \* SpaceNews 23Oct89 \*

Bulletin ID: SPC91023

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SpaceNews  
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MONDAY OCTOBER 23, 1989

SpaceNews originates at KD2BD in Wall Township, NJ, and is distributed weekly around the world. It is available for UNLIMITED distribution.

\* OSCAR-9 NEWS \*

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Max White at the Royal Greenwich Observatory reports that UoSAT-OSCAR-9 (UoSAT-1) decayed on Friday 13th October at 0751.49 GMT on Rev 44761.

Two possible locations for the final decay are given by different agencies as:

49.2S 220.9E  
46.4S 220.0E

These locations are over the South Pacific and were probably out of range of any receiving stations. The last report of telemetry we have so far is from K9CIS at the Richmond Community College in the USA. They heard the satellite between 03:43 and 03:49 on 13th October, and reported good signal strength and nominal telemetry. Any telemetry or reports from the last 6 hours of UO-9's life would be appreciated by the UoS Command Station at the following address:

UoSAT Spacecraft Engineering Research Unit

Department of Electrical and Electronics Engineering  
University of Surrey  
Guildford, Surrey GU2 5XH  
England

\* OSCAR-13 NEWS \*

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Peter (DB20S) reports that after reloading the onboard computer with IPS and the operational software, AO-13 was thoroughly checked out. The reason for the computer crash of "Black Monday" is still unknown, but all spacecraft systems are working nominally.

\* GALILEO NEWS \*

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Galileo was boosted into low-earth orbit by the U.S. Space Shuttle ATLANTIS last Wednesday, and then boosted out of Earth orbit by a solid rocket Inertial Upper Stage (IUS). The spacecraft will fly past Venus and twice by Earth, using gravity assists from the planets to pick up enough speed to reach Jupiter. Travel time from launch to Jupiter is a little more than six years.

The two ton Galileo orbiter spacecraft carries nine scientific instruments. There are another six experiments on the 750-pound probe. The probe's scientific data will be relayed to Earth by the orbiter during the 75-minute when the probe is descending into Jupiter's atmosphere.

Galileo Mission Schedule:

Venus Flyby (9,300 mi)	Feb. 14, 1990
Venus Data Playback	October 1990
Earth 1 Flyby (600 mi)	Dec. 13, 1990
Asteriod Gaspra Flyby (600 mi)	Nov. 03, 1991
Earth 2 Flyby (200 mi)	Dec. 13, 1992
Asteroid Ida Flyby (600 mi)	Sep. 02, 1993
Probe Release	July 1995
Jupiter Arrival (*)	Dec. 07, 1995
Tour of Galilean Satellites	Dec. 1995 -to- Oct. 1997

(\*): Includes Io flyby, probe entry and relay, and Jupiter orbit insertion.

\* MIR NEWS \*

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Module-D (the Service Module) will dock with Mir at the forward axial port today. On Wednesday, Soyuz TM-8 is scheduled to be moved from rear docking port to Mir's foward facing axial port. Progress M-2 is scheduled to be

launched on Friday, 27Oct89, and then will dock with Mir on 29Oct89.

\* MESSAGES de KD2BD \*

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>> KT7H : Tad, Packet bulletins have been posted!

\* FEEDBACK WELCOMED \*

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Feedback regarding SpaceNews can be directed to the author (John) via any of the following paths:

UUCP : ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd

PACKET : KD2BD @ NN2Z

MAIL : John A. Magliacane  
Department of Electronics Technology  
Brookdale Community College  
765 Newman Springs Road  
Lincroft, New Jersey 07738-1599  
U.S.A.

<<< Stay on course.....Say YES to Morse! >>>

\* SpaceNews \* >> Satellite News You Won't Find Everywhere Else << \* SpaceNews \*

<eof>

--

UUCP : ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd

PACKET : KD2BD @ NN2Z (John)

... "There is no expedient to which a man will not resort to  
avoid the real labor of thinking." .... Sir Joshua Reynolds.

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Date: 18 Oct 89 17:25:25 GMT

From: hpfcso!hpfcmgw!music@hplabs.hp.com (John Wells)

Subject: Building A (Very) Low Cost Repeater

/ hpfcmgw:rec.ham-radio / noel@ubbs-nh.MV.COM (N. Del More) / 11:20 pm Oct 15,  
1989 /

I have it in mind to build a (very) low cost repeater for use here as well as for use as an "emergency" repeater.

The idea that I have is to use two handhelds, probably two late model synthesized rigs.

Noel  
N2AXI

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I have tried this routine once using 2 ICOM IC22S (good rigs in their own right) and some home brew stuff to do a timer and IDer function and also a duplexer of sufficient quality. All of the radio and timer stuff was in a silver plated box to provide RF isolation, everything isolated and feed thru capacitors on the audio and power lines.... Oh it was a beauty of a job.

-BUT-

It didn't work. 'Why?' you might well ask.... Well, it is unfortunate, but the PLL circuitry will kick up enough sideband hash that a little tiny bit of the transmitter will feed into the receiver and cause some amount of de-sensing and in some cases, feedback conditions.

I think that the best thing to do for a cheepie repeater is to be able to have the two 2m units seperated by 1/4th mile and linked on 450.

The logistics are more complex but unless you are willing to go with clean commercial gear and top notch hardware, the idea may not be that practicle.

John Wells WA0LHB in Ft. Fun, Coloradio

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Date: 19 Oct 89 00:03:38 GMT  
From: hpfcso!hpfcdc!perry@hplabs.hp.com (Perry Scott)  
Subject: Field Day... OK... A proposal:

I've only participated in one field day. As an outsider, it seemed strange that field day was:

- o done in the summer. (no emergencies happen in the winter, right ?)
- o the exact start and stop time are known. (planned emergencies ?)
- o you get points for putting out marginal signal (sorry QRPers) that hardly anyone can hear.
- o the antenna systems and radios are usually commercially-made. (real hams roll their own stuff, right ?)
- o home stations are frowned upon. (In a real emergency, we all run to the nearest mountaintop, where the emergency isn't ?)

o more social event than communications (we hams do like to yak...)

I figure if you can crank up a gasoline generator and run a KW into a homebrew wire yagi, more power (pun intended) to you ! The field day that I saw was more gamesmanship than emergency preparedness. It doesn't take much to drive onto a mountaintop, set up a tower section with a rotatable tribander, fire up the generator (and linear), sit down in the warm Winnebago with a cold can of Coke, and start logging California contacts on the PC. I have more of a challenge at home with my barefoot TS520 and HF6VX vertical.

Sorry if this sounds too negative. Maybe field day is serving two purposes - on the one hand it gets everyone out of the house for a nice camping trip, while on the other hand it "demonstrates" emergency preparedness.

What behavior do we want to reward here ? I think emergency preparedness means:

- not using commercial power
- transmitting from the site of the emergency
- contacting most of the major metropolitan areas of North America with simulated traffic. (e.g. "Jimmy Carter is alive and well in Plains, Ga, end message." Not this twinkie "2A C0" no-op stuff.)
- Cooperation - passing traffic for someone that can't make it to a destination on their own. Most of emergency handling is cooperation, even if it's only staying off the frequency when someone else is handling traffic.
- Cooperative contesting - what a concept !
- No restrictions on mode (HF packet, anyone ?) or power (<1500)
- I would like to say "no point systems", but we need a way measure our performance relative to others, just to know how ready we really are.
- More credit for using non-commercial gear. Let's be realistic. Most hurricanes tend to topple towers and 6-element tribanders.

Perry Scott  
KF0CA

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Date: 19 Oct 89 16:51:04 GMT  
From: spdcc!merk!alliant!linus!raybed2!ewb@BLOOM-BEACON.MIT.EDU (EUGENE BALINSKI)  
Subject: New Dual Band HT from ICOM !!

Well they went and done it. Icom just announced the DUAL BAND version of their new 'SAT series ultra small HT's. It's called the IC-24 SAT.

The package is not much (if any) larger than the single band SAT series.  
Chech with your local Icom dealer for details.

Icom also announced the IC 1275 1200MHz base station, and 2 new repeaters  
1 for 2 Meters and the other for 1200 MHz.

You heard it here first.

73  
WA1UXA

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Date: 22 Oct 89 02:30:04 GMT  
From: unisoft!hoptoad!peora!tsdiag!ka2qhd!kd2bd@ucbvax.Berkeley.EDU (John  
Magliacane Wall Township NJ)  
Subject: News From OSCAR-11 20Oct89

\*\*UOSAT 2 COMPUTER STATUS INFORMATION\*\*

FAD1 OPERATING SYSTEM V2.0  
TODAY'S DATE IS 21 /10 /89  
UNIVERSAL TIME IS 14 :7 :58 DAY 7  
AUTO MODE IS SELECTED  
SPIN PERIOD IS - 162  
Z MAG FIRINGS = 0  
+ SPIN FIRINGS = 76  
- SPIN FIRINGS = 0  
RAM WASH POINTER AT FD29  
WOD COMMENCED 21 /10 /89 AT 0 :0 :9  
WITH CHANNELS 10 ,11 ,19 ,29 ,  
LAST CMD RECEIVED WAS 112 TO 1 WITH DATA 0

ATTITUDE CONTROL INITIATED, MODE 1

DIGITALKER ACTIVE

\*\*\*\* UoSAT-OSCAR-11 BULLETIN - 201 20th October 1989 \*\*\*\*

UoSAT MISSION CONTROL CENTRE  
University Of Surrey, Guildford, Surrey, GU2 5XH, England

\*\* UoSAT-OSCAR-9 \*\*

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(UoSAT-1) decayed on Friday 13th October at 0751.49 GMT on Rev 44761.

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**\*\* ITALY, NICARAGUA JOIN UOSAT-2 DCE GATEWAY NETWORK \*\***

While engineers at UoS were busy building the UoSAT-D and -E satellites, two new stations have joined the UoSAT-2 Digital Communications Experiment (DCE) gateway network. A University Amateur Radio club in Managua, Nicaragua, and an AMSAT group in Italy are the new active gateways.

After several months of work, Wes Morris (K7PYK) succeeded in establishing a DCE station at the Technical University in Managua, Nicaragua. Wes commutes to Managua frequently as an advisor to the University, and he has fitted the amateur radio club station for operation on all the AMSAT satellites. The station's call is YN3UNI. Student amateurs at the University will be using the DCE as an experiment in data communications and as a link to other radio amateurs for technical discussions.

The Italian DCE gateway was successfully put into operation during UoSAT-2 OSCAR-11 orbit 29947 on the 10th October, when I2KBD activated the DCE and sent mail to G0/K8KA at UoS. Alberto is now one of the three stations to operate the DCE in Europe (along with the Surrey command station and DB20S in Germany) and will soon start a regular mail forward with the other DCE gateways world-wide.

Each DCE gateway station forwards Packet Radio messages for large groups of terrestrial groundstations. Active gateways are WB6GFJ (USA), ZL1AOX (New Zealand), VK5AGR (Australia), DB20S (FRG), GB2UP (UK) and I2KBD (Italy).

[We just received news from G3AAJ that Ross (WB6GFJ) came safely through the California earthquake, but his gateway is out of commission until further notice.]

**\*\* OSCAR-13 STATUS \*\***

Peter (DB20S) reports that after reloading the onboard computer with IPS and the operational software, AO-13 was thoroughly checked out. The reason for the computer crash of "Black Monday" is still unknown, but all spacecraft systems are working nominally.

\*\* \$BID \*\*

Please use BID \$UOSAT.201 for PR BBS use.

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UUCP : ucbvax!rutgers!petsd!tsdiag!ka2qhd!kd2bd

PACKET : KD2BD @ NN2Z (John)

..."There is no expedient to which a man will not resort to  
avoid the real labor of thinking." ....Sir Joshua Reynolds.

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Date: 19 Oct 89 00:15:23 GMT

From: hpfcso!hpfcsc!perry@hplabs.hp.com (Perry Scott)

Subject: PL259 connector assembly

This is how I do it:

1. Put the UG connector on first
2. strip 1" of outer PVC jacket
3. comb braid over UG connector
4. Cut off enough braid so it doesn't contact the threads on the UG
5. leave about 1/4" of foam inner dielectric (I use the PL259 inside to judge the amount of clearance.)
6. Screw on the PL259. You should see the outer copper braid through the four little holes on the side of the PL259, and the center conductor should protrude out the end of the PL259.
7. Cut center conductor flush with PL259, solder.
8. Make sure UG and PL are screwed tightly.
9. Solder through the four little holes on the side.
10. Test Continuity of center conductors and shields. Check for shorts between center and shield.

I've never had a plug come off or go intermittent on me using this method. (My test is to clamp an S0-239 in a vice, screw in the PL259, and yank on the cable. If I can play tug-of-war without it coming out, it's a permanent job.) On the other hand, you can never reuse the PL259 after you solder those four little holes on the side. This method also ensures a few less places for water to enter the coax - you only have to seal the UG/PL junction and the PL/coax junction.

Perry Scott  
KF0CA



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Date: Mon, 23 Oct 89 09:42:34 CDT  
From: AXVSCCN%UICVMC.BITNET@UICVM.uic.edu (Chris Novy)  
Subject: Weather Radio

NWS was working on a project a few years ago to use DTMF tones, instead of the 1050 Hz tone, to activate weather radio receivers. The DTMF system would allow "intelligent" weather radios to tone-activate only for \*specific\* counties (as determined by the owner of the receiver). In the Chicago area, for instance, the NWR transmitter is located atop of the Sears Tower (about 1800 feet AGL). When the tone is issued, half of Illinois, parts of Indiana, Michigan and Wisconsin are alerted. I haven't been keeping current on the DTMF project but since I haven't seen any DTMF weather receivers at Radio Shack I assume the project is on hold. ...Chris...

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Chris Novy - WA9V                      BITNET: axvscn@uicvmc  
Southern Illinois Univ.                Internet: axvscn@uicvmc.aiss.uiuc.edu  
Morris Library - Systems               Packet: wa9v@wd9ebq      FAX: (618) 453-8109  
Carbondale, IL 62901-6632             Phone: (618) 453-2336    or   (618) 457-6149  
   ICBM: 37.43N 89.12W  
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End of INFO-HAMS Digest V89 Issue #797  
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